Docket No. 0026

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Number: 6,117.176 Issued: Sep. 12, 2000 \*

Name of Patentee: Applied Elastomerics, Inc.

For: ELASTIC-CRYSTAL GEL

Commissioner of Patents and Trademarks Washington, D.C. 20231

> ATTN: Decision and Certificate of Correction Branch of the Patent Issue Division

## REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT FOR PTO MISTAKE (37 CFR 1.322(A))

Attached in duplicate is a set of ten (10) correction Forms of PTO-1050 with at least one copy set being suitable for printing.

The exact page and line number where the errors occur in the application file are indicated by item number with respect to the Specifications and Claims as follows:

## SPECIFICATION CORRECTION ITEM 1

The texts in the patent under RELATED APPLICATIONS at column 1, line 14-25 do not correspond to applicant's amendments of 6/14/99 (see pages 1 and 2): RESPONSE TO OFFICE ACTION also see applicant's remarks in amendment of 10/12/99: FOURTH SUPPLEMENTAL AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 CFR 1.312 CONCURRENT WITH THE PAYMENT OF ISSUE FEE (see pages 11 and 12). The mistake "which in turn is a CIP of 957,290)." at line 21 of the patent being a minor error attributed to Applicant (under 37 CFR 1.323) which is being called to the attention of the Office should be corrected and/or made of record in the patent file.

## SPECIFICATION CORRECTION ITEM 2

The texts in the patent in the Figures at column 3, lines 23 and 25 do not correspond to applicant's amendments of 10/12/99: FOURTH SUPPLEMENTAL AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 CFR 1.312 CONCURRENT WITH THE PAYMENT OF ISSUE FEE which shows at page 3:



delete the words "composite articles" and insert --- composite and articles as shown generally by the relationship of  $G_n$  and  $M_n$  and more specific article examples of  $M_1$ ,  $M_2$ ,  $M_3$ , and  $M_4$  with  $G_n$  when the material  $M_n$  is n = 1 (fabric/cloth), n = 2 (foam/sponge), n = 3 (synthetic resin/plastic), and n = 4 (fibre) as shown in Figs 3d, 3e, 3h, and 3j respectively ---.

delete the words "composite articles" and insert -- composite and articles as shown generally by the relationship of  $G_n$  and  $M_n$  and more specific article examples of  $M_1$ ,  $M_2$ ,  $M_3$ , and  $M_4$  with  $G_n$  when the material  $M_n$  is n = 1 (fabric/cloth), n = 2 (foam/sponge), n = 3 (synthetic resin/plastic), and n = 4 (fibre) as shown in Figs 4l, 4m, 4n, and 4q respectively --.

#### SPECIFICATION CORRECTION ITEM 3

The texts in the patent at column 3, line 26 do not correspond to applicant's amendments of 8/12/99:SECOND SUPPLEMENTAL AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 CFR 1.312 BEFORE PAYMENT OF ISSUE FEE which shows:

delete "S-E-EB-S" and insert thereof --- S-E-EP-S ---.

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## **SPECIFICATION CORRECTION ITEM 4**

The texts in the patent at column 6, line 59; column 9, lines 9, 54, 67; column 12, line 15; column 13, line 9, and column 15, line 44 do not correspond to applicant's amendments of 9/16/99 THIRD SUPPLEMENTAL AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 CFR 1.312 BEFORE PAYMENT OF ISSUE FEE which at page 2-3 shows:

delete "poly(butadine)" and insert thereof --- poly(butadiene) ---.

At page 10, line 19, correct the word "polybutadine" to ---polybutadiene---.

At page 11, lines 16 and 24, "correct the word "negligable" to ---negligible---.

At page 11, 3rd line from the bottom of the page. Correct the word "detactable" to ---detectable---.

At page 12, at line 25, correct the word "resutls" to --- results---.

At page 14, line 12 and 13, delete the words "glass a transition" and insert --- a glass transition---.

At page 15, line 10, correct the word "amorpous" to read --- amorphous---.

At page 18, line 5, correct the word "steraric" to ---stearic---.

## REMARKS REGARDING CLAIM CORRECTIONS

Before proceeding to the correction of the claims, an accounting of the surviving claims is first in order. The amendment dates and the affected claims are as follows:

Amendment date	Claims amended
6/14/99	1,2,3,4,5,6,7,8,9,10
7/14/99	<del>1</del> ,5,6, <del>7,8,9,10</del>
8/12/99	1,3,7, <del>8</del> ,9,10
10/12/99	8

The final claims surviving at the time of issue are: claims 2 and 4 of the 6/14/99 amendment; claims 5 and 6 of the 7/14/99 amendment; claims 1, 3, 7, 9 and 10 of the 8/12/99 amendment; and claims 8 of the 10/12/99 amendment. Below is the list of the final amended claims with their original numbering from the latest to the earliest:

FOURTH SUPPLEMENTAL AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 CFR 1.312 CONCURRENT WITH THE PAYMENT OF ISSUE FEE made October 12, 1999 with claim 8 surviving:

8. (Thrice amended) An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more of the same block copolymers or mixtures of two or more of a different block copolymers, said block copolymers having the formula poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-propylene-ethylene-styrene), poly(styrene-ethylene-propylene-ethylene-ethylene-propylene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene), poly(styrene-ethylene-ethylene-propylene), poly(styrene-ethylene-ethylene-ethylene-propylene-ethylene-propylene-ethylene), poly(styrene-ethylene-ethylene-ethylene-ethylene-ethylene), poly(styrene-ethylene-

propylene)n, midblocks comprising one or more substantially crystalline polyethylene midblock segment(s), wherein subscript n is two or more; wherein said (I) block copolymers in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom, wherein said gel is capable of exhibiting greater tear resistance or greater fatigue resistance than a gel having a corresponding rigidity made from a substantially amorphous poly(styrene-ethylene-butylene-styrene) or poly(styrene-ethylene-propylene-styrene) block copolymers having substantially non-crystalline polyethylene midblock segments.

SECOND SUPPLEMENTAL AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 CFR 1.312 BEFORE PAYMENT OF ISSUE FEE made August 12, 1999 with claims 1, 3, 7, 9, and 10 surviving:

1. (thrice amended) An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more linear, branched, star-shaped (radial), or multiarm block copolymers or mixtures of two or more such block copolymers, said block copolymers having one or more midblocks, said midblocks comprising one or more substantially crystalline polyethylene midblocks and with (i) one or more amorphous midblocks or (ii) without amorphous midblocks. [; optionally] in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom, with the proviso [that] when said (I) block copolymers without any amorphous midblocks are combined with at least one block copolymer having at least one amorphous midblock, [wherein] that said [block] midblocks of said (I) block copolymers forming said crystal gel comprises a selected amount of crystallinity sufficient to exhibit a melting endotherm of at least about 40°C as determined by DSC curve.

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- 3. (Once amended) A gel according to claim 1 or 8, wherein said gel exhibits in differential scanning calorimeter (D[C]SC) a melting endotherm of about 25°C, 28°C, 29°C, 30°C, 31°C, 32°C, 33°C, 34°C, 35°C, 36°C, 37°C, 38°C, 39°C, 40°C, 41°C, 42°C, 43°C, 44°C, 45°C, 46°C, 47°C, 48°C, 49°C, 50°C, 51°C, 52°C, 53°C, 54°C, 55°C, 56°C, 57°C, 58°C, 59°C, 60°C, 61°C, 62°C, 63°C, 64°C, 65°C, 66°C, 67°C, 68°C, 69°C, 70°C, 71°C, 72°C, 73°C, 74°C, 75°C, 76°C, 77°C, 78°C, 79°C, 80°C, 90°C, 100°C, 110°C, or 120°C.
- 7. (Twice amended) A gel according to claim [1 or 8] 5, wherein said [gel is being denoted by G, is physically interlocked with a selected material M or in combination with one or more of the same gel or different gel forming a composite of the combination  $G_nG_n$ ,  $G_nG_nG_n$ ,  $G_nM_n$ ,  $G_nM_nG_nM_n$ ,  $G_nM_nG_nM_n$ ,  $G_nM_nG$

 $G_nG_nM_nG_nM_nG_n$  or a permutation of one or more of said  $G_n$  with  $M_n$ ; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity] composite being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner.

- 9. (Twice amended) A composite of claim 5 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel\_wherein [at least one of] said gel comprises at least one said block copolymer of poly(styrene-ethylene-propylene[-ethylene]-styrene), poly(styrene-ethylene-propylene[-ethylene])n, poly(styrene-ethylene-ethylene-butylene-butylene)n or a mixture of two or more of said block copolymers.
- 10. (Twice amended) A gel [composite] of claim [7] 3 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel, wherein said gel comprises at least one said block copolymer of poly(styrene-ethylene-ethylene-propylene), poly(styrene-ethylene-ethylene-propylene)n, poly(styrene-ethylene-ethylene-butylene)n, or a mixture of two or more of said block copolymers.

SUPPLEMENTAL AMENDMENT made July 14, 1999 with claims 5, and 6 surviving:

 $M_nM_nM_nM_nM_nM_n$  or a permutation of one or more of said  $G_n$  with  $M_n$ ; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity.

6. (Twice amended) A gel according to claim 1 or 8, wherein said gel being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner.

## RESPONSE TO OFFICE ACTION made June 14, 1999 with claims 2, and 4 surviving:

- 2. A gel according to claim 1 or 8, wherein said midblock copolymer segment having a crystallinity of at least about 20 mole % of (-CH<sub>2</sub>-)16 units forming said midblock of the block copolymer.
- 4. A gel according to claim 1 or 8, wherein said (I) block copolymer is formed in combination with a selected amount of one or more selected polymer or copolymer selected from the group consisting of poly(styrene-butadiene-styrene), poly(styrene-butadiene), poly(styrene-isoprene-styrene), poly(styrene-ethylene-propylene), poly(styrene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene), poly(styrene-ethylene-propylene), poly(styrene-ethylene-propylene), maleated poly(styrene-ethylene-propylene-styrene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-butylene), polystyrene, polybutylene, poly(ethylene-propylene), poly(ethylene-butylene), polypropylene, polyethylene, polyethylene, polyethylene oxide), copolymers of trifluoromethyl-4,5-difuoro-1,3-dioxole and tetrafluoroethylene, tetrafluoroethylene, polycarbonate, ethylene vinyl alcohol copolymer, polyamide or polydimethylsiloxane; wherein said selected copolymer is a linear, branched, radial, or multiarm copolymer.

## ORIGINAL AND ISSUED CLAIM NUMBERING

The original and issued claim numbering are as follows: 1, 2|3, 3|4, 4|5, 5|6, 6|7, 7|8, 8|2, 9, and 10. We now proceed to convert the above original amended claims to their issue numbering and as they should read without []s and underlining at issuance.

- 1. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more linear, branched, star-shaped (radial), or multiarm block copolymers or mixtures of two or more such block copolymers, said block copolymers having one or more midblocks, said midblocks comprising one or more substantially crystalline polyethylene midblocks and with (i) one or more amorphous midblocks or (ii) without amorphous midblocks, in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom, with the proviso when said (I) block copolymers without any amorphous midblocks are combined with at least one block copolymer having at least one amorphous midblock, that said midblocks of said (I) block copolymers forming said crystal gel comprises a selected amount of crystallinity sufficient to exhibit a melting endotherm of at least about 40°C as determined by DSC curve.
- 2. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more of the same block copolymers or mixtures of two or more of a different block copolymers, said block copolymers having the formula poly(styrene-ethylene-ethylene-butylenestyrene), poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene<sub>25</sub>styrene), poly(styrene-ethylene-propylene-ethylene-styrene), poly(styrene-ethylene-propyleneethylene-styrene), poly(styrene-ethylene-propylene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene)n, poly(styrene-ethylene-propylene)n, poly(styreneethylene-ethylene-butylene<sub>25</sub>)n, poly(styrene-ethylene-ethylene-propylene-ethylene)n, poly(styrene-ethylene-propylene-ethylene)n, poly(styrene-ethylene-propylene-ethylene propylene)n, midblocks comprising one or more substantially crystalline polyethylene midblock segment(s), wherein subscript n is two or more; wherein said (I) block copolymers in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom, wherein said gel is capable of exhibiting greater tear resistance or greater fatigue resistance than a gel having a corresponding rigidity made from a substantially amorphous poly(styreneethylene-butylene-styrene) or poly(styrene-ethylene-propylene-styrene) block copolymers having substantially non-crystalline polyethylene midblock segments.
- 3. A gel according to claim 1 or 2, wherein said midblock copolymer segment having a crystallinity of at least about 20 mole % of (-CH<sub>2</sub>-)<sub>16</sub> units forming said midblock of the block copolymer.

4. A gel according to claim 1 or 2, wherein said gel exhibits in differential scanning calorimeter (DSC) a melting endotherm of about 25°C, 28°C, 29°C, 30°C, 31°C, 32°C, 33°C, 34°C, 35°C, 36°C, 37°C, 38°C, 39°C, 40°C, 41°C, 42°C, 43°C, 44°C, 45°C, 46°C, 47°C, 48°C, 49°C, 50°C, 51°C, 52°C, 53°C, 54°C, 55°C, 56°C, 57°C, 58°C, 59°C, 60°C, 61°C, 62°C, 63°C, 64°C, 65°C, 66°C, 67°C, 68°C, 69°C, 70°C, 71°C, 72°C, 73°C, 74°C, 75°C, 76°C, 77°C, 78°C, 79°C, 80°C, 90°C, 100°C, 110°C, or 120°C.

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- 5. A gel according to claim 1 or 2, wherein said (I) block copolymer is formed in combination with a selected amount of one or more selected polymer or copolymer selected from the group consisting of poly(styrene-butadiene-styrene), poly(styrene-butadiene), poly(styrene-isoprene-styrene), poly(styrene-ethylene-propylene- propylene), poly(styrene-ethylene-propylene- styrene), poly(styrene-ethylene-butylene-butylene), poly(styrene-ethylene-propylene), maleated poly(styrene-ethylene-propylene- styrene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-propylene), maleated poly(styrene-ethylene-butylene), polystyrene, polybutylene, poly(ethylene-propylene), poly(ethylene-butylene), polypropylene, polyethylene, polyethylene, poly(dimethylphenylene oxide), copolymers of trifluoromethyl-4,5-difuoro-1,3-dioxole and tetrafluoroethylene, tetrafluoroethylene, polycarbonate, ethylene vinyl alcohol copolymer, polyamide or polydimethylsiloxane; wherein said selected copolymer is a linear, branched, radial, or multiarm copolymer.
- 6. A gel according to claim 1 or 2, wherein said gel is being denoted by G, is physically interlocked with a selected material M or in combination with one or more of the same gel or a different gel forming a composite of the combination  $G_nG_n$ ,  $G_nG_nG_n$ ,  $G_nM_n$ ,  $G_nM_nG_n$ ,  $M_nG_nM_n$ ,  $M_nG_nM_n$ ,  $M_nG_nG_n$ ,  $M_nG_n$
- 7. A gel according to claim 1 or 2, wherein said gel being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic

shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner.

- 8. A gel according to claim 6, wherein said composite being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner.
- 9. A composite of claim 6 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel, wherein said gel comprises at least one said block copolymer of poly(styrene-ethylene-ethylene-ethylene-ethylene-ethylene-ethylene-ethylene-ethylene-ethylene)n, poly(styrene-ethylene-ethylene-butylene)n, poly(styrene-ethylene-ethylene-butylene)n or a mixture of two or more of said block copolymers.
- 10. A gel of claim 5 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel, wherein said gel comprises at least one said block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-ethylene-butylene-butylene), or poly(styrene-ethylene-ethylene-butylene), or a mixture of two or more of said block copolymers.

## **CLAIM CORRECTION ITEM 5**

The above recited amended claims 1, 2, 4, 6, 7, 8, 9, and 10 (numbered as they should appear in the patent) do not correspond to the issued claims as follows:

The patented claim 1, at column 23, lines 2-20 do not correspond to the amended claim 1 of

8/12/99.

The patented claim 2, at column 23, lines 21-45 do not correspond to the amended claim 8 of 10/12/99.

The patented claim 4, at column 23, lines 50-59 do not correspond to the amended claim 3 which is renumbered claims 4 of 7/14/99.

The patented claim 6, at column 24, lines 14-25 do not correspond to the amended claim 5 of 7/14/99.

The patented claim 7, at column 24, lines 26-46 do not correspond to the amended claim 6 of 7/14/99.

The patented claim 8, at column 24, lines 47-59 do not correspond to the amended claim 7 of 8/12/99.

The patented claim 9, at column 24, lines 60-65 do not correspond to the amended claim 9 of 8/12/99.

The patented claim 10, at column 24, 25, 26, lines 66-67, 1-4, and 1-2 respectively do not correspond to the amended claim 10 of 8/12/99.

In summary, columns 1, 3, 6, 9, 10, 12, 13, 15, as well as claims 1, 2, 4, 6, 7, 8, 9, and 10 of columns 23, 24, 25, and 26 require correction. The nature of the mistake on the part of the Office is such that a certificate of correction may be deemed inappropriate in form due to the extensive nature of the corrections, therefore, patentee urge that the Commissioner may issue a corrected patent in lieu thereof as a more appropriate form for certificate of correction, without expense to the patentee.

3. Please send the Certificate to: Applied Elastomerics, Inc., 163 West Harris Avenue, South San

Francisco, CA 94080.

Jøhn Y. Chen

Respectfulls

Agent for Patentee

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Applied Elastomerics, Inc. 163 West Harris Avenue

South San francisco, CA 94080

September 18, 2000

PATENT NO. :

6,117,176

DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 1 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 1, correct line 14 after year 1994 by deleting:

At column 1, correct line 14, after the number 286 by adding --;

At column 1, correct lines 21-25 by deleting the following:

"which in turn is a CIP of 957,290); now U.S. Pat. No. 5,334,646 Ser. No. 08/152,743, filed Nov. 15, 1993 now U. S. Pat. No. 5,629.294 (CIPs of 114.688; 935,540; 876,118; 705,096; 957,290; 705,711"

and adding the sentence:

-- The above patents and applications are specifically incorporated herein by reference. --.

At column 3, correct line 23, after the word articles before the period by adding the following:

-- as shown generally by the relationship of  $G_n$  and  $M_n$  and more specific article examples of  $M_1$ ,  $M_2$ ,  $M_3$ , and  $M_4$  with  $G_n$  when the material  $M_n$  is n = 1(fabric/cloth), n = 2 (foam/sponge), n = 3 (synthetic resin/plastic), and n = 4 (fibre) a s shown in Figs 3d, 3e, 3h, and 3j respectively -

At column 3, correct line 25, after the word articles before the period by adding the following:

-- as shown generally by the relationship of  $G_n$  and  $M_n$  and more specific article examples of  $M_1$ ,  $M_2$ ,  $M_3$ , and  $M_4$  with  $G_n$  when the material  $M_n$  is n = 1(fabric/cloth), n = 2 (foam/sponge), n = 3 (synthetic resin/plastic), and n = 4 (fibre) a s shown in Figs 4l, 4m, 4n, and 4q respectively --.

MAILING ADDRESS OF SENDER:

Applied Elastomerics, Inc., 163 West Harris, Ave.,

PATENT NO.

So. San Francisco, Ca 94080

Correction sheet 2 of 10

PATENT NO. : 6,117,176

DATED : Sep. 12, 2000

INVENTOR(S) : John Y. Chen

163 West F So. San Fr	astomerics, Inc., Iarris, Ave., ancisco, Ca 94080 rection (PTO Form 1050)—	PATENT NO	6,117,176		
At column 15, correct line 44	by deleting the word "stera	aric" and adding the	e correct word:		
At column 13, correct line 9 b					
transition					
At column 9, correct line 54 b correct word:negligible					
	At column 6, correct line 59 by deleting the word: "poly(butadine)" and adding instead the correct word: poly(butadiene)  At column 9, correct line 8 by deleting the word: "polybutadine" and adding instead the correct word: polybutadiene				
At column 6, correct line 59 b correct word: poly(butadie					
At column 3, correct line 26 b instead the correct notation:		ation: "S-E-EB-S"	and adding		
is hereby corrected as shown below:					
It is certified that error appear	s in the above—identified pate	ent and that said Lett	ers Patent		

PATENT NO. : 6,117,176

DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 3 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23 correct claim 1 at lines 2-20 by deleting:

"1. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more linear, branched, star-shaped (radial), or multiarm block copolymers or mixtures of two or more such block copolymers, said block copolymers having one or more midblocks, said midblocks comprising one or more substantially crystalline polyethylene midblocks and with one or more amorphous midblocks; optionally in combination with a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of a plasticizing oil (III) sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom with the proviso that said block copolymers without any amorphous midblocks are combined with at least one block copolymer having at least one amorphous midblock, wherein said block midblocks of copolymers forming said crystal gel having a selected amount of crystallinity sufficient to exhibit a melting endotherm of at least about 40°C as determined by DSC curve."

and adding the corrected claim 1 as follows:

(i) -- 1. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more linear, branched, star-shaped (radial), or multiarm block copolymers or mixtures of two or more such block copolymers, said block copolymers having one or more midblocks, said midblocks-comprising one or more substantially crystalline polyethylene midblocks and with (I), one or more amorphous midblocks or (ii) without amorphous midblocks, in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom, with the proviso when said (I) block copolymers without any amorphous midblocks are combined with at least one block copolymer having at least one amorphous midblock, that said midblocks of said (I) block copolymers forming said crystal gel comprises a selected amount of crystallinity sufficient to exhibit a melting endotherm of at least about 40°C as determined by DSC curve. --

MAILING ADDRESS OF SENDER: Applied Elastomerics, Inc.,

163 West Harris, Ave.,

PATENT NO.

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DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 4 of 10

It is certified that error appears in the above—identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23 correct claim 2 at lines 21-45 by deleting:

"2. An improved gelatinous composition comprising: a crystal gel formed from 100 parts by weight of one or more block copolymers or mixtures of two or more such block copolymers, said block copolymers having the formula poly(styrene-ethyleneethylene-butylene-styrene), poly(styrene-ethyleneb<sub>45</sub>-ethylene-propylene-styrene), poly(styrene-ethylene-butylene<sub>25</sub>-styrene), poly(styrene-ethylene-ethylenepropylene-ethylene-styrene), poly(styrene-ethylene-propylene-ethylene-styrene), poly(styrene-ethylene-propylene-ethylene-ethylene-propylene-styrene),poly(styreneethylene-ethylene-butylene)<sub>n</sub>, poly(styrene-ethyleneb<sub>45</sub>-ethylene-propylene)<sub>n</sub>, poly(styrene-ethylene-butylene<sub>25</sub>)<sub>n</sub>, poly(styrene-ethylene-ethylenepropylene-ethylene)<sub>n</sub>, poly(styrene-ethylene-propylene-ethylene)<sub>n</sub>, poly(styreneethylene-propylene-ethylene-ethylene)<sub>n</sub>, midblocks comprising one or more substantially crystalline polyethylene midblock segment, wherein subscript n is two or more; in combination with or without a selected amount of one or more of a (II) polymer or copolymer, and selected amounts of a plasticizing oil (III) sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom, wherein said gel is capable of exhibiting greater tear resistance or greater fatigue resistance than a gel having a corresponding rigidity made from a substantially amorphous poly(styrene-ethylene-butylene-styrene) or poly(styrene-ethylenepropylene-styrene) block copolymers having substantially non-crystalline polyethylene midblock segments."

MAILING ADDRESS OF SENDER: Applied Elastomerics, Inc., 163 West Harris, Ave.,

So. San Francisco, Ca 94080

PATENT NO.

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INVENTOR(S): John Y. Chen

Correction sheet 5 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23, add the corrected claim 2 as follows:

-- 2. An improved gelatinous composition comprising: a crystal gel formed from (I) 100 parts by weight of one or more of the same block copolymers or mixtures of two or more of a different block copolymers, said block copolymers having the formula poly(styrene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylenepropylene-styrene), poly(styrene-ethylene-butylene<sub>25</sub>-styrene), poly(styreneethylene-ethylene-propylene-ethylene-styrene), poly(styrene-ethylene-propylene-ethylenestyrene), poly(styrene-ethylene-propylene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene)<sub>n</sub>, poly(styrene-ethylene-ethylene-propylene)<sub>n</sub>, poly(styrene-ethylene-butylene<sub>25</sub>)<sub>n</sub>, poly(styrene-ethylene-propyleneethylene)<sub>n</sub>, poly(styrene-ethylene-propylene-ethylene)n, poly(styrene-ethylene-propyleneethylene-ethylene-propylene)<sub>n</sub>, midblocks comprising one or more substantially crystalline polyethylene midblock segment(s), wherein subscript n is two or more; wherein said (I) block copolymers in combination with or without a selected amount of one or more of (II) a polymer or copolymer, and selected amounts of (III) a plasticizing oil sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom, wherein said gel is capable of exhibiting greater tear resistance or greater fatigue resistance than a gel having a corresponding rigidity made from a substantially amorphous poly(styreneethylene-butylene-styrene) or poly(styrene-ethylene-propylene-styrene) block copolymers having substantially non-crystalline polyethylene midblock segments. --

Applied Elastomerics, Inc., 6,117,176 MAILING ADDRESS OF SENDER: PATENT NO.

163 West Harris, Ave., So. San Francisco, Ca 94080

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INVENTOR(S): John Y. Chen

Correction sheet 6 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 23, correct claim 4 at lines 50-59 by deleting:

"4. (Once amended) A gel according to claim 1 or 2, wherein said gel exhibits in differential scanning calorimeter (DCS) a melting endotherm of about 28°C, 29°C, 30oC, 31oC, 32oC, 33oC, 34oC, 35oC, 36oC, 37oC, 38oC, 39oC, 40oC, 41oC, 42°C, 43°C, 44°C, 45°C, 46°C, 47°C, 48°C, 49°C, 50°C, 51°C, 52°C, 53°C, 54°C, 55°C, 56°C, 57°C, 58°C, 59°C, 60°C, 61°C, 62°C, 63°C, 64°C, 65°C, 66°C, 67°C, 68°C, 69°C, 70°C, 71°C, 72°C, 73°C, 74°C, 75°C, 76°C, 77°C, 78°C, 79°C, 80°C, 90°C, 100°C, 110°C, or 120°C."

At column 23, add the corrected claim 4 as follows:

-- 4. A gel according to claim 1 or 2, wherein said gel exhibits in differential scanning calorimeter (DSC) a melting endotherm of about 25°C, 28°C, 29°C, 30°C, 31°C, 32°C, 33°C, 34°C, 35°C, 36°C, 37°C, 38°C, 39°C, 40°C, 41°C, 42°C, 43°C, 44°C, 45°C, 46°C, 47°C, 48°C, 49°C, 50°C, 51°C, 52°C, 53°C, 54°C, 55°C, 56°C, 57°C, 58°C, 59°C, 60°C, 61°C, 62°C, 63°C, 64°C, 65°C, 66°C, 67°C, 68°C, 69°C, 70°C, 71°C, 72°C, 73°C, 74°C, 75°C, 76°C, 77°C, 78°C, 79°C, 80°C, 90°C, 100°C, 110°C, or 120°C. --

At column 24, correct claim 6 at lines 14-25 by deleting:

"6. A gel according to claim 1 or 2, wherein said gel is being denoted by G, is physically interlocked with a selected material M forming a composite of the combination  $G_nM_n$ ,  $G_nM_nG_n$ ,  $M_nG_nM_n$ ,  $M_nG_nG_nM_n$ ,  $G_nM_nM_nG_n$ ,  $G_nM_nG_nM_nG_n$ ,  $M_n M_n M_n G_n$ ,  $M_n M_n M_n G_n M_n M_n M_n$  or a permutation of one or more of said  $G_n$  with M<sub>n</sub>; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity."

MAILING ADDRESS OF SENDER: Applied Elastomerics, Inc., 163 West Harris, Ave., So. San Francisco, Ca 94080

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DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 7 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 24, add the corrected claim 6 as follows:

6. A gel according to claim 1 or 2, wherein said gel is being denoted by G, is physically interlocked with a selected material M or in combination with one or more of the same gel or a different gel forming a composite of the combination  $G_nG_n$ ,  $G_nG_nG_n$ ,  $G_nM_n$ ,  $G_nM_nG_n$ ,  $M_nG_nM_n$ ,  $M_nG_nG_n$ ,  $M_nM_nM_nG_nM_n$ ,  $M_nG_nG_nM_n$ ,  $G_nM_nG_nG_n$ ,  $G_nG_nM_nM_n$ ,  $G_nM_nM_nG_n$ ,  $G_nG_nM_nG_nM_nG_n$ ,  $G_nM_nG_nM_nM_n$ ,  $M_nG_nM_nG_nM_nG_n$ ,  $G_nG_nM_nM_nG_n$ ,  $G_nG_nM_nG_nM_n$ ,  $G_nG_nM_nG_nM_nG_n$ ,  $G_nM_nG_nM_nG_n$ ,  $M_nM_nM_nG_n$ ,  $M_nM_nM_nG_nM_nM_n$  or a permutation of one or more of said  $G_n$  with  $M_n$ ; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity.--

## At column 24, correct claim 7 at lines 26-46 by deleting:

"7. (Twice amended) A gel according to claim 1 or 2 wherein said gel being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner."

MAILING ADDRESS OF SENDER:

Applied Elastomerics, Inc., 163 West Harris, Ave., So. San Francisco, Ca 94080

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INVENTOR(S): John Y. Chen

Correction sheet 8 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 24, add the corrected claim 7 as follows:

7. A gel according to claim 1 or 2, wherein said gel being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner. --

At column 24, correct claim 8 at lines 47-59 by deleting:

"8. A gel according to claim 1 or 2, wherein said gel is being denoted by G, is physically interlocked with a selected material M or in combination with one or more of the same gel or different gel forming a composite of the combination  $G_nG_n$ ,  $G_nG_nG_n$ ,  $G_nM_n$ ,  $G_nM_nG_n$ ,  $M_nG_nM_n$ ,  $M_nG_nG_n$ ,  $M_nM_nM_nG_nM_n$ ,  $M_nG_nG_nM_n$ ,  $G_nM_nG_nG_n$ ,  $G_nG_nM_nM_n$ ,  $G_nM_nM_nG_n$ ,  $G_nG_nM_nG_nM_nG_n$ ,  $G_nM_nG_nM_nM_n$ ,  $M_nG_nM_nG_n$ ,  $G_nG_nM_nM_nG_n$ ,  $G_nG_nM_nG_nM_n$ ,  $G_nG_nM_nG_nM_nG_n$  or a permutation of one or more of said G<sub>n</sub> with M<sub>n</sub>; wherein when n is a subscript of M, n is the same or different selected from the group consisting of paper, foam, plastic, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity."

MAILING ADDRESS OF SENDER: Applied Elastomerics, Inc., 163 West Harris, Ave.,

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Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 9 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## At column 24, add the corrected claim 8 as follows:

-- 8. A gel according to claim 5, wherein said composite being formed into a gel hand exercising grip, a gel shape floss suitable for use as a dental floss, a gel crutch cushion, a gel cervical pillow, a gel bed wedge pillow, a gel leg rest, a gel neck cushion, a gel mattress, a gel bed pad, a gel elbow pad, a gel dermal pad, a gel wheelchair cushion, a gel helmet liner, a gel cold and hot pack, a gel exercise weight belt, a gel traction pad or belt, a gel cushion for splints, a gel sling, a gel brace for the hand, wrist, finger, forearm, knee, leg, clavicle, shoulder, foot, ankle, neck, back, rib, a gel sole for orthopedic shoe, a gel shaped toy article, a gel optical cladding for cushioning optical fibers from bending stresses, a gel swab tip, a gel fishing bate, a gel seal against pressure, a gel thread, a gel strip, a gel yarn, a gel tape, a weaved gel cloth, a gel fabrics, a gel balloon for valvuloplasty of the mitral valve, a gel trointestinal balloon dilator, a gel esophageal balloon dilator, a gel dilating balloon catheter use in coronary angiogram, a gel condom, a gel toy balloon, a gel surgical and examination glove, a self sealing enclosures for splicing electrical and telephone cables and wires, a gel film, or a gel liner. --

## At column 24, correct claim 9 at lines 60-65 by deleting:

"9. A composite of claim 6 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel in combination with M selected from foam, plastic, fabric, metal, ceramics, synthetic resin, synthetic fibers or refactory materials."

## At column 24, add the corrected claim 9 as follows:

-- 9. A composite of claim 6 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel, wherein said gel comprises at least one said block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styreneethylene-ethylene-propylene)<sub>n</sub>, poly(styrene-ethylene-butylene-styrene), or poly(styrene-ethylene-butylene)<sub>n</sub> or a mixture of two or more of said block copolymers. --

MAILING ADDRESS OF SENDER: Applied Elastomerics, Inc., 163 West Harris, Ave., So. San Francisco, Ca 94080

PATENT NO.  $_{-}^{6,117,176}$ 

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DATED

Sep. 12, 2000

INVENTOR(S): John Y. Chen

Correction sheet 10 of 10

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At columns 24, 25, & 26, correct claim 10 at lines 66-67, 1-4, & 1-2 respectively by deleting:

A composite of claim 8 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel in combination with or without M selected from foam, plastic, fabric, metal, ceramics, synthetic resin, synthetic fibers or refactory materials and in combination with or without one or more gels having a different rigidity."

At column 24, add the corrected claim 10 as follows:

-- 10. A gel of claim 4 shaped in the form of a gel liner for lower limb or above the knee amputee prosthesis formed by injection molding, extruding, spinning, casting, or dipping of said gel, wherein said gel comprises at least one said block copolymer of poly(styrene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylenepropylene)<sub>n</sub>, poly(styrene-ethylene-ethylene-butylene-styrene), or poly(styrene-ethylene-butylene)<sub>n</sub>, or a mixture of two or more of said block copolymers. --

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PATENT NO.